INTRODUCTION

1. The Port of Miami, Miami-Dade County Seaport Department, working through the House Committee on Transportation and Infrastructure requested the Corps study the feasibility of improving navigation in Miami Harbor. The Port Authority and other interests believe that the existing navigation project could be improved for operational efficiency and safety of deep draft commercial vessels by providing a deeper channel with widening in certain areas. Such deepening and widening could reduce vessel operation costs on the existing project resulting in transportation cost savings

2. House Document 101-205, dated June 21,1990, recommended the current channel dimensions and depths for Miami Harbor. That authorizing document recommended, "that the authorized project for Miami Harbor be modified to include Federal maintenance of the Fisher Island turning basin, and to provide a channel 44 feet deep and 500 feet wide from the open ocean to the existing beach line, 42 feet deep and 500 feet wide from the beach line to Cut 3 station 33+00 (near Fisher Island turning basin), and 42 feet deep and 400 feet wide from Fisher Island turning basin to the west end of the container berths located on Lummus/Dodge Island. This channel would terminate in a turning basin with a depth of 42 feet and a diameter of 1,600 feet." See figure 1.

3. Construction of those authorized dimensions as of January 2002 includes the 44-foot deep by 500-foot wide channel from the open ocean to the existing beach line and, the 42-foot deep by 500-foot wide segment from the beach line to Cut 3 station 33+00 (near Fisher Island turning basin). The remaining 42-foot deep by 400-foot wide segment from the Fisher Island turning basin to the west end of the container berths on Lummus/Dodge Island is partially complete. The Miami-Dade County Seaport Department has requested the U.S. Army Corps of Engineers to complete construction of that remaining segment. The port authority's contractor had difficulty removing rock in that segment which resulted in the request for the Corps to takeover the work. That work occurred under a 204e agreement which allows the project sponsor to pay for all design and construction initially and then seek reimbursement for the Federal share upon satisfactory completion of each usable increment.

4. This General Reevaluation Report examines potential navigation improvements for the existing Federal system of navigation channels. Four turn wideners and two turning basin modifications received consideration with associated deepening. One non-structural channel realignment also received evaluation. Ship simulation testing of the proposed structural turn wideners and turning basin modifications allowed for further design refinements in consultation with the Biscayne Bay Pilots. An environmental resource baseline survey provided the initial starting point for coordination of environmental impacts as a result of the proposed navigation improvements with resource agencies.

Coordination of the environmental resource survey with the Biscayne Bay Pilots resulted in further modifications to the proposed turn wideners and turning basin designs to minimize impacts to hardbottom/reef habitats, rock/rubble habitat and seagrasses. Economic benefits for the proposed improvements received a detailed evaluation in this study.

STUDY AUTHORITY

5. A resolution from the Committee on Transportation and Infrastructure, United States House of Representatives, adopted October 29, 1997, provides the study authority as follows:

> "Resolved by the Committee on Transportation and Infrastructure of the United States House of Representatives, That the Secretary of the Army is requested to review the report of the Chief of Engineers on Miami Harbor published as Senate, Document 90-93, 90th Congress, 2nd Session, and other pertinent reports, with a view to determining the feasibility of providing channel improvements in Miami Harbor and channels."

6. Additional authorization appeared in a subsequent appropriations bill for Miami Harbor, Florida, which contained the following language:

> "The Committee has provided $25,000,000 to reimburse the Miami-Dade Seaport Department for the Federal share of dredging work which has been accomplished and an additional $300,000 to initiate a General Reevaluation Report (GRR) to determine the feasibility of further Port deepening."

STUDY PURPOSE AND SCOPE

7. The study involved an evaluation of problems associated with navigation on the existing Miami Harbor project. Specifically, the study reviewed the needs of the Port Authority, commercial shippers, pilots, and concerns of the United States Coast Guard (USCG). Overall environmental, social, and economic concerns were evaluated in the study area and identified to the extent possible within the limits of available technology and study funding restrictions.

8. Alternative solutions for correcting problems and providing deeper and wider channels for safer transit of large commercial vessels with more cargo tonnage onboard were identified for evaluation of costs, benefits, and environmental impacts associated with implementation. Base data for that evaluation came from an environmental resource survey, hydrographic surveys and core borings on the harbor project as well as information from the sponsor, commercial shippers, USCG, Federal, State, and local resource agencies. Two ship

simulation studies tested various components to correct navigation problems identified by the harbor pilots and other shipping interests. A numerical model study provides an evaluation of the impacts of the proposed Miami Harbor deepening on velocities and salinity in Miami Harbor, and on velocities along the coastal ocean shoreline in the vicinity of Government Cut.

9. Economic investigations provided tangible navigation benefits. An environmental impact statement contains U.S. Fish and Wildlife Service Coordination, National Marine Fisheries Service coordination, cultural resource investigations, and other environmental resource agency considerations. The study resulted in the formulation of a plan that safely, effectively, and economically resolves the commercial navigation problems with a minimum impact on the environment.

PRIOR STUDIES AND REPORTS

10. This study represents a Draft General Reevaluation Report, which provides an interim response to the authorizing Congressional resolution. It evaluates potential navigation improvements and is restricted in its level of detail. Once approval of the draft report occurs from higher authority, public coordination of the document will follow. Results of that coordination process will provide the necessary information to provide a final report, which will then receive further public coordination. Pending approval of the final report by higher authority and submission to Congress for authorization, if Congress concurs with the report findings and authorizes the project, a request for funds to perform construction would occur.

11. Federal interest in navigation of Miami Harbor started as early as 1902. Interest in improving Miami Harbor for deep draft commercial shipping has continued since that time. **Table 1** contains the prior studies and reports over the years on the deep draft portion of the Miami Harbor project.

Table 1 - Prior Studies and Reports

		CHIEF OF ENGINEERS	PUBLISHED DOCUMENTS				
STUDY[1]	ACTS	RECOMMENDATIONS	TYPE[2] /NO./ CONGRESS/ SESSION				
S	06/13/1902	Channel (Government Cut) 18 feet deep across peninsula and north jetty	H	662	56	18	
	03/02/1907	South jetty and channel 100 feet wide					3
S	07/25/1912	Channel 20 X 300 feet and extension of jetties	H	554	62	2	
S	03/03/1925	Channel 25 feet deep at entrance and 25 X 200 across Biscayne Bay	H	516	67	4	
S	07/03/1930	Channel 300 feet wide across Biscayne Bay and enlarging municipal tuning basin	R&H	15	71	2	4
PE	08/30/1935	Depth of 30 feet to and in turning basin	S	73	2		5
S	08/26/1937	Widen turning basin 200 feet on south side	R&H	86	74	2	
S	03/02/1945	Virginia Key improvement	S	251	79	2	
S	03/02/1945	Consolidation of Miami River and Miami Harbor projects: widening at mouth of Miami River to turning basin and Government Cut; and channel from Miami River to the Harbor of Refuge	H	91	79	1	
S	07/14/1960	Channel 400 feet wide across Biscayne Bay; enlarge turning basin 300 feet on south and northeasterly sides; dredge turning basin on north side of Fisher Island; delete Virginia Key development and Dinner Key approach channel	S	71	85	2	
S	08/13/1968	Enlarging the existing entrance channel to 38-foot depth and 500-foot width from the ocean to the existing beach line; deepening the existing 400-foot wide channel across Biscayne Bay to 36 feet; and deepening the existing turning basins at Biscayne Boulevard terminal and Fisher Island to 36 feet	S	93	90	2	
FR	11/28/1990	Include Federal maintenance of the South Fisherman's channel for 9,200 feet westward of the Fisher Island turning basin; provide a channel 44 feet deep and 500 feet wide from the open ocean to the existing beach line; 42 feet deep and 500 feet wide from the beach line Cut 3 station 33+00 (near Fisher Island turning basin); and 42 feet deep and 400 feet wide from Fisher Island turning basin to the west end of the container berths located on Lummus/Dodge Island. The channel would terminate in turning basin with a depth of 42 feet and a diameter of	H	205	101	2	